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Causes of Academic Difficulty

David W. Davidson, O.D., M.S.

Introduction

It is rare for an optometry student to get into academic difficulty. The primary reason so few optometry students do get into academic difficulty is that, for the most part, these students have been carefully selected from a pool of applicants on the basis of their academic preparation. Because of the process used to select applicants for admission, there is little need for the "weeding-out" process often found in undergraduate programs. The weeding-out is done at the front end, as part of the selection process. Each optometric institution commits time, money and human resources to the professional school admissions process. The net result is an entering class composed of well-qualified candidates who have met the rigorous entrance requirements and who have competed successfully from among the pool of applicants for the limited number of highly-coveted seats in the first year of the professional program. The expectation is that these students represent the best available candidates who are well prepared for the study of optometry.

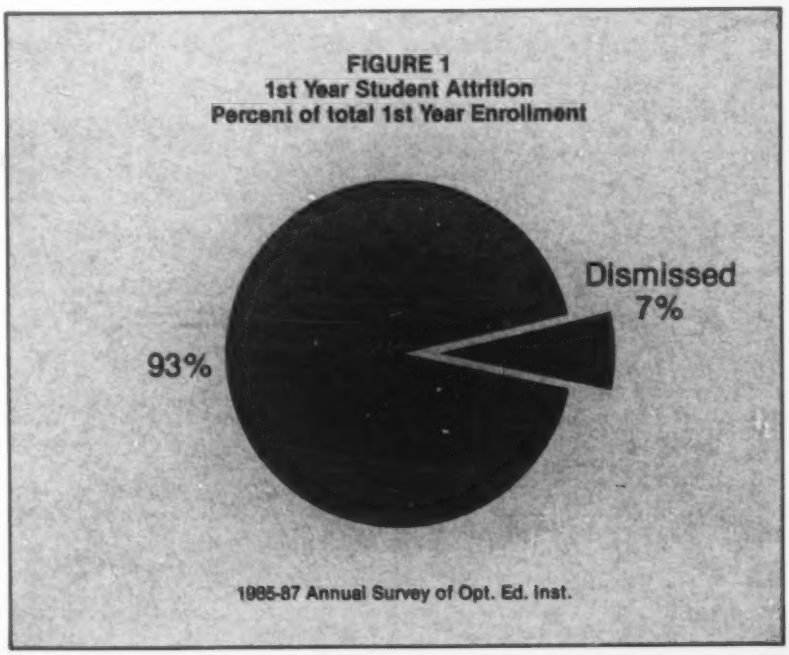
Barring unforeseen complications, these students should not be experiencing academic difficulty, and, in fact, they are not.

The Association of Schools and Colleges of Optometry, in its annual survey of optometric educational institutions, produces statistics on student characteristics for all schools and colleges of optometry in the United States and Canada. These statistics include rate of attrition. The data for the last several years shows that overall first-year attrition in all optometry schools for any reason has averaged just under 7%.[1]

If you were to look at overall optometry school attrition, the rate drops to 3%. That is because the attrition rate drops off considerably after the completion of the first professional year, and is practically non-existent in years three and four.

A closer look at these data shows that attrition for reasons of academic difficulty represents the largest proportion of the overall attrition rate.

However, these data are likely to be misleading in that it is unclear how many of the students who were dismissed from the professional program for academic reasons had underlying problems such as illness, financial distress, personal problems or other difficulties that may have contributed to their ultimate academic failure. This author's experience with students in academic difficulty suggests that academic difficulty often is secondary to some other undesirable situation (such



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Note: These papers were originally presented at a symposium on student remediation at the Education Section of the 1988 Academy of Optometry meeting.

as financial problems, marital problems or other emotional disturbances).

Selection Criteria

The applicant selection process in the schools and colleges of optometry is quite complex. Furthermore, the process varies somewhat from institution to institution. Across the spectrum of institutions, however, there are certain common applicant characteristics which can be used to identify candidates who are very likely to be offered an admission.

Quality of academic preparedness

The most obvious indicator of an applicant's academic preparedness is the undergraduate grade point average. However, grades are evaluated from a variety of different perspectives. In addition to the overall grade point average, admissions committees are particularly interested in an applicant's performance in the sciences and in specific prerequisite courses. Also, the committees will look at performance in a student's chosen major. Furthermore, the committees give consideration to the pattern of grade acquisition, i.e., determining if the applicant's academic performance is getting better as time goes on, getting worse with time, or staying constant. It is considered preferable for an applicant to be showing academic improvement as he or she progresses through the undergraduate curriculum as opposed to declines in performance. Also, admissions committees will consider grades in relation to the reputation of the institution where those grades were received. Often this is a difficult judgment to make, but the fact remains that undergraduate institutions vary considerably in their degree of competitiveness, grade inflation and quality of instruction. Most committees would be more impressed with an applicant who had a somewhat marginal academic record from a prestigious Ivy League school as compared to an applicant with the same academic record where the majority of the courses were completed at a small, relatively unknown community college.

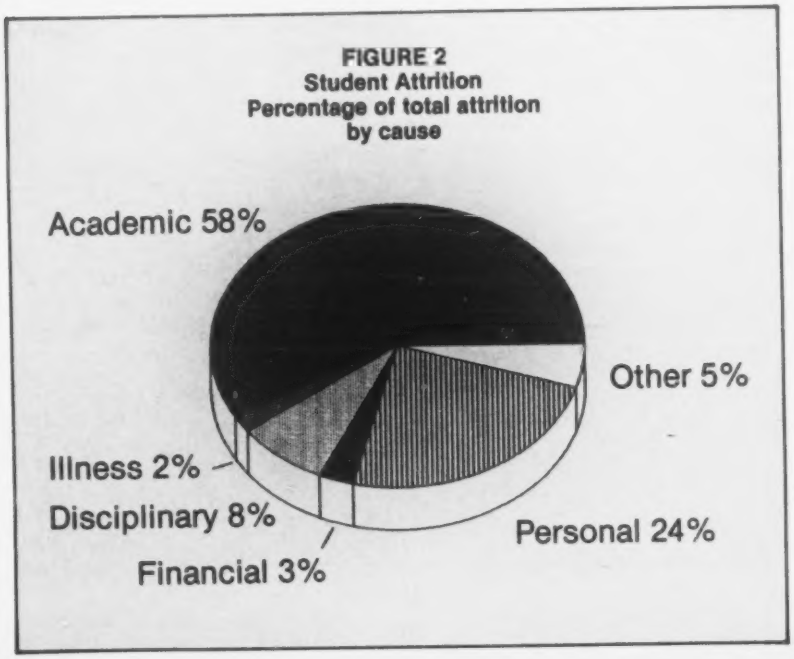
Another indicator of academic preparedness is the admission test scores. All applicants to the schools and colleges of optometry are required to take the Optometry Admission Test. This test attempts to measure a candidate's acquired knowledge in the disciplines tested (Biology, General Chemistry, Organic Chemistry, Physics, Mathematics and Reading Comprehension). It is recognized that, as an indicator of acquired knowledge, the OAT is far from perfect. It is a one-day examination and subject to all the potential distractions and complications of any other one-day examination. Furthermore, the applicants represent a very heterogeneous group with respect to preparation for the OAT. Many applicants will be years beyond the relevant subject matter when they take this exam, particularly older, career change applicants. Also, students vary considerably in their ability to perform well on standardized multiple choice examinations, particularly when the test is being carefully timed and the applicant is under a great deal of stress to perform well. Lastly, there is considerable variation in test preparation from one applicant to another. Some applicants decide (or are advised) to take the examination "cold," that is, without any specific test review or preparation, adopting the philosophy that the test should be a pure measure of acquired knowledge, uncontaminated by specific review or preparation. Others spend significant time in review, or pay substantial sums of money to take a commercial OAT test preparation program. In spite of these differences among test takers, and the flaws in the test's predictability for success in the professional program, the test does correlate positively with future performance in optometry school[2,3,4] and therefore does represent one more piece of information that can be used to measure a candidate's academic preparedness.

Another factor related to academic preparedness is the amount of schooling a candidate has completed prior to entering the professional school programs. The schools and colleges of optometry vary considerably on this factor. The minimum requirement by any school or college of optometry for undergraduate course work completed is two years. Most schools require a minimum of three years undergraduate course work completed. However, all of the schools and colleges seem to give preference to applicants who have completed their bachelor's degree requirements in that the majority of students entering optometry programs have a bachelor's degree.[5] The reasons cited for giving preference to applicants who have completed a bachelor's degree are not related strictly to academic preparedness. They are related also to an applicant's "well-roundedness" and therefore will be explained in more detail under that subheading.

Motivation towards optometry

Admissions committees want to feel confident that applicants considered for admission are making an appropriate

FIGURE 2
Student Attrition
Percentage of total attrition by cause



career choice. It certainly is unfortunate when an admitted student drops out of the professional program because it wasn't what he or she expected it to be. Fortunately this does not happen very often but that is because admissions committees try hard to ensure that candidates who are ultimately selected for admission have researched their career options carefully and know enough about optometry to have convinced themselves (and ultimately an admissions committee) that they are well suited for optometry and vice versa. Admissions committees are most impressed with applicants who have researched several different career options and have decided upon a career in optometry after having made careful comparisons of optometry to other alternatives. It is desirable for an applicant to know enough about optometry to be able to enter into a dialogue with committee members about the profession. A well-prepared applicant will know something about the profession's history, scope of optometric practice, trends, income-earning potential, and various practice alternatives.

Personality attributes

A few optometry schools claim to select applicants for admission purely on the basis of paper credentials. They do not consider an applicant's personality as part of the selection process. On the other hand, most optometry schools do include some assessment of personality in the admissions process. This is most often done through on-site personal interviews with members of the admissions committee, letters of recommendation and related "life" experiences. Some schools go so far as to incorporate a formalized question-and-answer "personality inventory" as part of the selection process. Assessment of an applicant's personality characteristics in terms of making that applicant well suited to a career in optometry is arguably one of the most difficult judgments facing an admissions committee. Personality indices are not easily subjected to quantification; they are not very standardized and admissions committee members usually are not sufficiently qualified on the basis of their own background and training to be evaluating personalities and personality differences. What kinds of personality characteristics are admissions committees looking for? The following come to mind:

1. Leadership ability—Does the applicant demonstrate leadership ability in his or her demeanor? To have this characteristic come across well in a personal interview requires the applicant to display the proper combination of assertiveness, self-confidence, politeness, and understanding. An applicant's potential for leadership can be demonstrated on the basis of work experience, and leadership positions in school clubs, religious groups, athletics, fraternities or sororities, and participation in community service activities.

"Assessment of an applicant's personality characteristics . . . is arguably one of the most difficult judgments facing an admissions committee."

2. Well-roundedness—In spite of the assortment of science prerequisites required, admissions committees like to see applicants complete a well-rounded undergraduate liberal arts curriculum. This is justified on the basis of helping the applicant develop the interpersonal skills needed in order to establish the so-called "doctor-patient" relationship. This is partly the reason why committees give preference to candidates who have completed a bachelor's degree. A full four years of undergraduate college education is usually required in order for a candidate to have completed all of the science prerequisites, as well as having had the necessary time to take an assortment of humanities, arts and social sciences courses. Furthermore, the additional year or two of undergraduate education allows the applicant to become somewhat more mature and that is often desirable.

In addition to a well-rounded undergraduate liberal arts education, a candidate can improve his or her well-roundedness by travel and by demonstrating a healthy mix of academics, work and social life.

3. Maturity—Another difficult responsibility expected of admissions committees is to judge an applicant's maturity. A candidate's age doesn't (or at least shouldn't) enter into this judgment. Rather, it is an assessment of the candidate's maturity as measured against the expected maturity level for a given age group. If a candidate is 20 years old, his or her level of maturity is not compared to all other applicants, but rather is measured against the degree of maturity expected of typical 20-year-olds.

4. Communication skills—Admissions committees like applicants with good communication skills. This not only includes good grammar and sentence structure, but an ability and willingness to express ideas verbally. Written communications skills are also extremely valuable. Consequently, the application for admission often requires the applicant to write an essay. Faculty are often critizing optometry students for their communication skills, particularly written communication skills as evidenced by the quality of answers to essay examinations. It is not difficult to find optometry students who perform well on multiple choice examinations, but do poorly on essay examinations. Perhaps admissions committees should place more emphasis on this attribute in the selection process.

Causes of Academic Difficulty

With admissions committees using such carefully constructed selection criteria, it should be expected that all students admitted into the professional programs would complete the program successfully. As indicated previously, almost all of them do. Why then do some optometry students get into academic difficulty in spite of the care in admissions? In most instances, academic difficulty in optometry schools can be traced to some other underlying form of difficulty.

Financial difficulties

An optometric education in the 1980s has become quite expensive. The average tuition for all schools and colleges of optometry in 1987 was $6,000.00 per academic year, with tuition at some of the institutions as high as $14,000.00.[6] With the cost of an optometric education this high, it is a rare student who can afford to attend optometry school without borrowing money. The average graduate from

optometry school in 1987 was $28,000.00 in debt.[7] Understandably, students want to keep their level of indebtedness to a minimum and therefore many of them work part time while attending school. Through informal analysis, it is estimated that over 70% of optometry students work up to 10 hours per week, with many working 15 or even 20 hours per week. Some students are able to contend with this added burden on their time better than others. However, almost all working students, when queried, will indicate that they would prefer not to have to work because it cuts into their study time and interferes with their course work. Some students gain employment during late-night hours, reducing their available hours of sleep and in the process compromising their energy level and ability to concentrate when they are studying, and thereby lowering their academic performance.

In addition to the academic problems associated with working part time while trying to be a full-time professional student, occasionally there are psychological problems associated with the high cost of an optometric education. Some students become rather troubled over ultra-tight budgets. Many optometry students are married, some with children and the available budgets are often considerably less than is needed to maintain even a minimally acceptable standard of living. For some students this causes considerable anxiety and these psychological distractions interfere with their academic performance.

Emotional difficulties

A book could be written about the emotional hurdles to becoming an optometrist in today's environment. Suffice it to say that optometry school is very stressful. Every school and college of optometry has an office of student services and in every case, one of the services offered is counseling.

1. *Marital problems*—One of the most frequent reasons students seek counseling is marital tension. There are numerous examples of optometry students attempting to negotiate "commuter" marriages where the optometry student has moved to the location of the optometry school and the spouse was left behind, and they get together on occasional weekends or vacations. This arrangement can be taxing even on the strongest partnership. Spouses often demand what they feel is their fair share of attention, especially if there are children involved, and the optometry student is often perceived as being insensitive to these needs, particularly during "midterm season" and in preparation for finals and National Boards.

2. *Financial difficulties*—It was mentioned previously that financial difficulties and budgetary constraints cause many optometry students to have to work. In addition, these financial difficulties frequently lead the student to psychological counseling. There is continuing pressure from the federal government to curtail federally insured loan programs for health professional students. Oftentimes these efforts to reduce federal spending on health education loans will paint the health professional student as driving a fancy car, living luxuriously, and taking exotic vacations at the taxpayers' expense—the result of federally-sponsored health education loans. The fact is there may be occasional examples of this kind of behavior, but it is far from the rule, and in fact, very infrequent. The vast majority of optometry students live very frugally and are budgeted so closely that for some it will be so difficult a life style that it results in emotional difficulties and the need for psychological counseling.

"The vast majority of optometry students live very frugally and are budgeted so closely that for some it will be so different a lifestyle that it results in emotional difficulties and the need for psychological counseling."

3. *Stress*—For many students the course work in the contemporary optometric curriculum, particularly the first two years, is simply overwhelming. Staff psychologists frequently complain that optometry students are getting sleep, exercise and nutrition inadequate to sustain peak performance abilities. Students complain that faculty and administrators are not concerned or even sensitive to the problem. The demands of the curriculum, the attitudes of faculty and administration and the overall tension-filled professional environment seems to fuel the stress level rather than relieve it. These multiple stresses accumulate over time, resulting in abnormal behaviors among students. These behaviors include a shortened attention span, chronic fatigue, negative attitudes, marital difficulties and a trend towards drug and alcohol abuse.

Academic Difficulty Without Any Apparent Underlying Cause

Occasionally an optometry student will get into academic difficulty without apparent underlying problems. While these instances are rare, they do exist and can be attributed to several factors.

We must acknowledge that, in spite of the effort that goes into the applicant selection process, it is less than perfect. Occasionally a candidate is admitted to optometry school who is inadequately prepared for the rigors of the optometric curriculum.

There has been a continuing decline in the number of applicants to the schools and colleges of optometry over the last 10 to 15 years. In 1975, when we were at or near the peak in applications, there were reported to be 4.3 applicants for every available seat.[8] That figure has been declining ever since and in 1988, the data reported by the Association of Schools and Colleges of Optometry indicated 1.7 applicants for every available seat.[9] This decline in applicants means that the institutions are digging deeper into their respective applicant pools to fill their entering classes, and candidates are getting into school today who would not have been admitted 10 to 15 years ago.

Each of the schools and colleges of optometry has a published affirmative action plan and is aggressively recruiting minority applicants. Published (and non-published) data indicate attrition among minority students is higher than that among non-minority students. This suggests several things. First, it suggests that minority students may have uniquely challenging obstacles to successfully completing the optometric curriculum. These obstacles include a lack of minority support personnel on the faculty and administration, an inadequate peer support

structure due to the small number of minority students at any given institution, and an overall environment and set of attitudes that has not been conducive to success for minority students. Secondly, it suggests that some minority students may have been admitted who were inadequately prepared for the optometric curriculum. This may be partly the result of the institutions' strong efforts to admit minority students, and partly the result of inadequate preparation for some minority students in spite of adequate paper credentials.

A sensitive issue, often occurring without much notice, is the occasional admission to the professional program of a student who bypassed the institution's normal selection procedures. This may occur for political and/or financial reasons. There is no available data to substantiate this activity and therefore the frequency of occurrence is unknown. It would seem likely, however, that if this type of action resulted in the admission of a student who is inadequately prepared, the likelihood of academic difficulty for this student is quite high.

Conclusion

Academic difficulty among optometry students is uncommon but does exist. In most instances the academic difficulty can be traced to some underlying cause other than inadequate academic preparation. It would seem that the best way to avoid academic difficulty among optometry students is effective prevention, i.e., preventing academic problems before they occur. Using the analogy to "primary health care," one can argue that prevention is our first line of defense. Common sense would indicate that prevention is more effective, less costly and less traumatic than treatment. An effective program of prevention against academic difficulty among optometry students would include the following components.

Admission should be restricted to those applicants who meet the institution's selection criteria. The institution also must employ careful deliberation in the establishment of selection criteria to ensure that those criteria effectively screen students who should not be admitted, without being arbitrary, unfair, biased or discriminatory.

Each institution should offer a pre-enrollment early academic enrichment program. Such a program should be designed to help identify and bolster specific weaknesses, particularly math and writing skills, and offer review in the relevant biological and physical sciences. Furthermore, this program should offer an introduction to those courses in the first professional year that represent the greatest hurdles to academic success. In this way students can have a more realistic set of academic expectations, develop improved self-confidence and begin to establish the foundation for the study of optometry.

The institution must make appropriate support services available to students. This would include financial aid, housing, and counseling services. In addition, appropriate services should be available to support special student groups such as minority students, handicapped students, and foreign students.

"The institution also must employ careful deliberation in the establishment of selection criteria to ensure that those criteria effectively screen students who should not be admitted, without being arbitrary, unfair, biased or discriminatory."

Remedial programs must be offered as needed. The programs would include faculty willing to assist students needing extra help; tutorial services including peer tutoring as well as paid tutoring by upper class students, graduate students and consultants; specialized curricular pathways for those students who have the innate intellectual ability, but are unable to handle the pace of the conventional four-year curriculum. Examples include modified curricula that make it possible to complete the first two professional years over a three-year period, approved leaves of absence, and part-time curricula for those students who must work or must assume other outside responsibilities (such as the rearing of a child) while attending school.

In summary, the best way for an institution to minimize academic difficulty among its students, and to solve these problems when they arise, is to foster a philosophy of commitment and support for all students who have been admitted to the professional program. This support includes:

1. An administration that is willing to invest the necessary institutional resources in terms of personnel and dollars required in order to establish the necessary support network for students with specific needs.
2. A faculty that is innovative in their teaching methods and sensitive to the variation in learning style and abilities of the students under their tutelage, and lastly,
3. An institutional philosophy that places a high enough priority on the educational endeavor, and on student support services, to enable these services to respond effectively to individual student needs as well as the needs of the student body as a whole.

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